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Georgia State Horticultural Society

(ORGANIZED 1878)

Eatonton, Ga.,
Dec. 12th. 1921.

Prof. N. I. Brittan,
Bronx Garden,
New York City.
My dear Sir:-

Mr. Warren H. Manning has made several copies of a work that was written by an American botanist and deposited in a botanical garden in Spain, where it was recovered by the late Judge Black of Indianapolis, and presented to me.

Mr. Manning was pleased with the old book in manuscript and made copies for distribution where they may find appreciation. If you really prize the book, you are more indebted to Mr. Warren H. Manning, than to me.

It is, however, true that I desired a copy placed in your library.

My Hunt ancestors have lived in the neighborhood of the Bronx and Byrum rivers since 1650 odd, first by purchase ^{of land} from the Indians and second by grant from the British Governor of New York.

Respectfully yours,

W. H. Hunt.

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December 16, 1921

Mr. B. W. Hunt

Georgia State Horticultural Society

Eatonton, Georgia

My dear Sir:

I am in receipt of your valued letter of December 12th, and of the very interesting typewritten document you have kindly presented to the New York Botanical Garden, which we added to the library here with high appreciation of your thoughtfulness.

Your family name is well-known to me, and I am filing your letter with the book. I hope that at sometime you may visit the New York Botanical Garden.

Yours very truly

Director-in-Chief

(Text appearing on brown front cover).

This manuscript, bound in this cover, was presented by Don Jose Maria Lopez - Cepers, Plaza Alfaro, 7 (Casa Marillo), Sevilla, Espana, in January 1909, to James E. Black, of Indianapolis, Indiana, and by him presented, April, 1912, to Benjamin W. Hunt, Esq., of Eatonton, Putnam County, Georgia, widely and justly distinguished for his knowledge and skill as a practical botanist.

LIBRARY
NEW YORK
BOTANICAL
GARDEN.

William Jatham

A few lines and remarks for the use of the officers,
physicians and students of His M. J. Majesty's

Botanic Garden at Madrid

intended to introduce a Botanical Correspondence with
the principal botanists of the United States

of N. America.

Merely exchanging good offices for the benefit of
science in the science of Botany in general; and to
add to the very extensive and valuable collection of
His M. J. Majesty in particular the numerous productions
of the several American States which appear to have
been hitherto omitted.

Being admitted to their reflection by
William Jatham, a Traveller from the said United States
now sojourning in

Madrid 10th June 1796.

21. 13. 18 - Given by W. Jatham

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5.

to procure them for an institution so adequate to their cultivation; for in the United States I have not knowledge of any public establishment to this end; indeed the gardens of the Philadelphia Hospital and the Professorship in the several universities of learning where this study is encouraged may be considered as.

6.

The present professor of Botanic and natural history in the University of Pennsylvania Benjamin Smith Barton, Esq. is well known in the world of letters at an early period besides in Philadelphia the present metropolitan of the United States, & is a relative also Professor of Chemistry in the same University. This gentleman's very extraordinary talents, experience and application will be found a great assistance; or perhaps in laying a foundation for systematic gardens in Philadelphia for which I should think the gardens of the Philadelphia Hospital would be convenient. With such additional regulations as might be necessary to reciprocate an exchange of plants across the Atlantic ocean, and more by consultation with Doctor Barton I am persuaded that nothing will be requisite to sell the attention to the subject than to signify the collective wish of these associates in the direction of His Majesty's establishment here.

A similar foundation in New York on account of its proximity to the sea, and facility of communication by water towards the lakes of Canada and other interior parts would very probably lead to a knowledge of numerous new species among the infinite classes of vegetation; and in that city Dr. Jay, Mr. Livingston, Mr. Harrison, Messrs. Moultrie, Truitt and others who have been in Spain & seen the language would (I doubt not) cheerfully contribute their attention.

7.

In the Southern States where my knowledge were particularly extensive I have of no public where there are also few private botanical collections; a private gentleman who are particularly fond of this study, and whose circumstances and rural residence are favorable to the pursuit.

In the County of Gloucester upon York River in Virginia a Mr. Martin (some years past) was eminent in this line, and published a work (I think entitled "Flora Virginica"). Whether his gardens are continued by his descendants I cannot tell.

In the County of Williamsburg City in Virginia (near Newport's River upon James River) the late Dr. Warr (one of the Judges of the General Court of that Commonwealth) is said to have established the best botanic garden which has been known in that Country; and I understand this to be continued in prosperity by his son who possesses (with the



8

estate) a similar disposition. The conveniency of this situation to the Sea Port of Norfolk, and its advantages of interior communication would render it a most eligible spot for making a collection; and I am positive an inclination of the proprietor would not be wanting to give every possible aid.

Upon the same River about one hundred miles further up the Country Thomas Randolph Esquire of Varina who was educated in Scotland and is married to a daughter of Mr. Jefferson (the late Minister in France) is said to have paid much attention to this Study; and his situation is very favorable to it.

In Dinwiddie County in Virginia near James Greenway (a Correspondent of Linnaeus's) has very considerable collection of preserv'd plants, according to the Linnaean Method; and as his Country residence is very favorable I dare say his Garden's contain many things worth notice.

9.

In North Carolina where the Field of Botany is very Copious particularly in the Family of Ipseocaulis and other medical plants; the varieties of convolvulus; abundant species of the Sauris, aguelion, and ever Greens of Various kinds, I think it would be easy to call the attention of practicing Physicians to the subject: - I do not recollect any collection in this way either public or private, or any Gentleman whose turn has lead him to this Study. I will not however neglect to notice one on the borders of South Carolina upon the River Lee General Henry William Harrington a Gentleman of liberal Education, a great Farmer, and possessed of an Estate and inclination which wants nothing but a request to render every Service which these parts afford towards an accumulation to be wished for by every friend of Science & Humanity.

10

At Charleston in South Carolina I believe the Gardens of a Mr. Watson in the Suburbs of the City contain most productions of that Climate, at least they are said to be the best repository for Collections of native productions intended for exportation.

In Georgia there appears to be as great a similarity to the productions of Florida that it perhaps may not be an object to trouble the People of that Country.

In the more mountainous parts of the Country I should suppose the Moravian establishments in North Carolina would be the best Centre for Collections; and I am persuaded that the Attention of that Society would be cheerfully employ'd, particularly of Traugotte Bagge Esquire their Merchant who is a great Philanthropist and has considerable influence in all their Towns.



11. In most parts of all the Southern States there
 men of affluant fortune reside on their own farms in rural
 retirement and even, a sufficient number are not wanting
 thro every part of the Country who possess constant leisure
 and leisure, knowledge for the general cultivation of this
 science if the pursuit was once set in motion either by
 example, or application to them; and I am persuaded that the
 dignity and high standing of His M. C. Majesty's Asiatic
 Society of Madrid could give a tone the undertaking of very
 considerable consequence to the world, and to the friendly
 intercourse of the two Countries, if they should think proper
 to make this short sketch the basis of a printed Circular
 letter to the respective Gentlemen herein named, and many
 others in the United States for whose favorable reception
 thereof I dare venture to pledge myself as an acquaintance
 in habits of intimacy with most of them.
- 12.

In the letter of the Mississippi extending into
 Several States I will take the liberty of mentioning my
 Friends

The Hon. J. George Turner One of the Territory No. West
 Judges of the United States. of Ohio &

Robert Alexander Require of)
 Bedford County Kentucky

Gen. J. James White M. C. Member of Territory N. West
 Congress from Nashville Cumberland & of Ohio &

Arthur Campbell Esq. Washington)
 County upon Station N. of the Tennessee/ Virginia

13. Who are all of them Men of Learning and Industry; who would
 meet the aid of most persons in their respective Countries
 as well on account of their own standing as a general dis-
 position to give a knowledge of their productions to the
 world; and who can frequently find opportunities of transmitting
 to New Orleans the result of their respective endeavours.

In my own part it remains but to add that in every
 thing wherein I can be useful I am ready to be commanded;
 which together with a small appendix containing a few farther
 intimations that may lead to experiments and researches is
 all I have at present the power of contributing.

14. I recollect nevertheless at this instant that
 there may be a propriety in suggesting to a Botanist sent from
 hence by His M. C. Majesty thro the principal Rivers of
 Pennsylvania, Virginia and North Carolina would I doubt not
 meet every hospitable Attention & Aid in the Eastern Country
 in collecting & transporting thro' the Atlantic Sea Ports the
 productions which they might find on the respective Rivers;
 and as all these routes lead them into the Western Country

young waters of the Mississippi which become navigable for boats in a short distance from their respective sources they could readily engage the assistance of Newbern to accompany them to New Orleans, and experience the same friendly reception on the route.

16.

There's this second very rare libraries would be made in the wide fields of philosophy; & in the country of which I am speaking it is greatly to be lamented that many valuable natural productions have perished for want of scientific attention, or were the ignorance and ignorance of the first settlers of New Countries.

In the animal Kingdom the destruction of the Buffalo (of recent date) is a striking instance in the population of Kentucky; & it is not improbable that the same bones which we now discover there of an animal which (with me) is a new discovery, may be traces of a similar state of barbarity in those who have preceded us some centuries past.

16

In the more immediate scope of our enquiry I at this moment recollect two solitary instances which have escaped the thought & lamentations of time past: The one a most primitive species of False accidentally preserved upon a rock in the mouth of James River, which is known as David Lewis' rock. These fossils commence at it; & the other a most beautiful specimen of a plant which from its rich and luxuriant flower I term "the Golden Manganese". & which I have seen in no other Country but the neighbourhood of Abington in the County of Washington in Virginia on a branch of the River Tennessee, & which alone with the addition of a great variety of larch trees an Indian Creek near Montague River (at no great distance from thence, & navigable for boats to New Orleans) I hold to be well worth a voyage across the Atlantic Ocean.

17.

Conscious however how much Your Excellency's time must be occupied with the various & highly important which His Majesty has confided to Your Care, I would not be supposed to intrude these matters upon Your personal reading: If they are only examined officially in the Department to which they are especially commendable, & which should reap ever as much an advantage from them I shall be fully compensated; & if they should casually come into Your Excellency's hands at a future leisure hour it will be a surplus of gratification to believe Your Excellency will receive them as a proof that a stranger who has been pleased to think well of has applied his time in more ways than one for the service of a Country where he is sensible of singular honors & hospitality.

I have the honor to be Yr. Excellency's

Oht. H. Servt. --

Madrid, June 10th, 1786.

Ed. Nathan.



Appendix:

A Catalogue of Botanical Productions in the United States of America and His M. Catholic Majesty's Dominion of X. and Y. Indies.

[illegible]

Ceanothus heterophyllus
Ceanothus cuneata
Carya indica
Cassia repens
Cassia . . .
Cleome lucida
Collinsia
Convolvulus asperatus
Convolvulus asperatus
Convolvulus rubrus
Cornus florida
Cucurbita leucocarpa
Cupressus disticha
Cuscuta ligustrina
Corylus ovellana
Cyananthus virginica
Cercis canadensis
Ceratophyllum demersum
Cucurbita pepo
Cucurbita verrucosa
Cucurbita melopepo
Caryophyllus
Chamaecrista floribunda
Chamaecrista pulcherrima

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 anonyms harpeus
 anonyms amerioans
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Lake George Florida
 Ditto
 Lake N. Florida
 near Lakeo. Florida
 near Lake Manatee
 near N. Florida
 Tombigbee River
 Lake George Fla.
 Virginia River
 Ditto
 all the United States
 all America
 in the low water
 various mountains
 near the mountains
 various of Mississippi
 all America
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 States
 near Lakeo. Florida
 Virginia
 Mississippi & St. Louis

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JANUARY 1908

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VERBENA

32

The two annexed Sketches of Verbena vulgarly called Verbein are I suppose the kind which Mr. Cutler mentions in the Columbian Magazine for May 1787 as being used very successfully in some disorders which prevailed in the American Army.

I have in some other places also met with a recommendation of Vervein for some complaint, but I do not exactly recollect where or what; but as I observe from the species that is recommended, that Gentleman must have made a mistake and stepped into the same Error which I once did Myself, it may be wise to note my experiences on this head.

32

In October 1782 I was shipwrecked on the Jersey Coast and landed on a desert Island about five miles from the main land. The bleakness of our situation added to the Violence of the Fatigue gave me a Severe Ague as I ever experienced, although I have had that complaint several times both in Europe and in America.

On my reaching the Main Land in a Canoe, I landed at the House of one Leedland on Cape May in a Violent Fever; The man who was a plain farmer made but little of my disorder, and told me it was too late to administer a remedy that night, but if I could breakfast with him the next Morning and stay till my fit came on, he would undertake to cure me immediately.

33

The severity of the Fever induced me to inquire more about the Person whose simple appearance bespoke no very extensive Medical knowledge; However, being satisfied with his Character, and assured that he had cured many cases of long standing I was determined to risk his experiment although he was unable to account for any certain operation or describe the qualities of his Medicine. Observing that he only stepped out of his House for one single Root, and seeing where he threw the Tops of the Plant, I prepared to examine it and found it to be the (Verbena) Vervein &c on the Annexed Sketch.

As I was, notwithstanding my determination, somewhat averse to taking his usual dose, Mr. Ludlam gave me but one Tea Cup full of the decoction of this Root about the strength and appearance of moderate Coffee, just as the cold fit came on; and covered me up in a warm bed telling me that "if this did not operate, as he was doubtful I had not taken it strong enough for my Case, I might repeat it next day at the same appearance of the cold fit, and it would certainly cure me affectually."

This first dose threw me into a gentle slumber and profuse sweat which continued until some hours after Night came on; My Fever abated but I felt much weakened.

24

The next day I made a stronger decoction from the same Root and took a Tea Cup & a half full covering myself as before

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THE UNIVERSITY OF CHICAGO
DEPARTMENT OF THE HISTORY OF ARTS
AND ARCHITECTURE

in bed on the approach of the Fit: In a short time, it puked me severely, purged me, and sweated me gently which completed the cure agreeable to Mr. Ludlam's predictions.

I had a relapse some time in the (then approaching) winter: I then took a pint & a half (English Measure) of the decoction aforesaid which cured me at one dose with a milder operation. On my return Southwardly to the place from whence I had sailed, and thence to Carolina, an overseer of Col. Davies near Halifax being in a very low state of Health, with the Ague and without any medical assistance, I determined to relieve him with this remedy; but unfortunately for the Patient I mistook the blue blossomed species for the White, having stumbled upon it in a state nearly resembling the other, and not knowing that there were more than one of this Family. I attributed the difference which I perceived either to the soil or climate or perhaps to both.

On administering the decoction as aforesaid I removed the Ague, but increased the Fever Violently, and the operation appeared to be very different from my former experience, I attributed this change either to a weakness of the dose, or effect of the Weather, thinking that so many Degrees Southing might produce such an effect as to destroy the properties of the medicine; And the next day I repeated the dose stronger which threw the Patient into a Delirium accompanied with an excessive Fever, that was likely to prove his end.- I do not exactly recollect how he got over it, but I believe he was relieved by Bleeding.

36 In the meantime I had recourse to every comparative investigation I could devise among the different Appearances of the Vervein to discover if there were not more kinds than one. I found several of the Blue blossom differing widely in the shades of their Color and formation of their plants, though they all seemed to be of the same species.

At last I discovered a very luxuriant growth of the White blossomed kind No. 1 in a rich spot of black earth which was more than six English feet in height; and on approaching near to it I very easily perceived by mistake of the kinds 1 & 2 in the annexed draft;- that the White blossomed Vervein was the kind used by Mr. Ludlam; and that notwithstanding the blue blossoms, should frequently assume the appearance of the other, it was very easy to detect the imposition; for although they are in many things alike, it seems very clear to me that the white kind always vegetates regularly, shoots its leaves two and two at right angles, (or nearly so) has a square stem, somewhat hairy like the Nettle, and a leaf resembling Balm, while the blue adopts fifty irregular stunted shapes, is of a clearer green, and hard smoother surface.

37 I have since this frequently used the White, both for Myself and for others on many occasions and have never failed to cure the worst Agues with it alone.

The White blossomed Vervein (Vervaine) is to be found

THE HISTORY OF THE UNITED STATES OF AMERICA

The history of the United States of America is a story of growth and change. It begins with the first settlers who came to the continent in search of a new life. They found a land of opportunity, but also a land of challenge. The early years were marked by struggle and hardship, but the spirit of the pioneers was unyielding. They built a nation from scratch, one that was based on the principles of liberty and justice for all. The story of the United States is a story of the triumph of the human spirit over adversity.

The early years of the United States were a time of great discovery. The pioneers explored the vast continent, seeking new lands and new opportunities. They found a land of infinite possibilities, a land where the future was uncertain but the potential was limitless. The pioneers were brave and bold, and they were determined to make their mark on the world. They built a nation that was based on the principles of liberty and justice for all, and they fought for those principles with courage and conviction.

The United States has a rich and diverse history. It is a land of many cultures, many languages, and many traditions. The people of the United States have built a nation that is a melting pot of different backgrounds and beliefs. This diversity is one of the strengths of the United States, and it is a source of pride for its people. The United States is a land of opportunity, a land where the dream of a better life is within reach for everyone.

The history of the United States is a story of progress and achievement. The pioneers laid the foundation for a great nation, and their descendants have built upon that foundation with hard work and dedication. The United States has made great strides in science, technology, and industry, and it has become a world leader in many fields. The United States is a land of freedom and democracy, and it is a source of inspiration for people around the world. The story of the United States is a story of hope and optimism, a story that shows the power of the human spirit to overcome all obstacles.

The United States is a land of great beauty and great diversity. It is a land of mountains, rivers, and oceans, a land of forests and fields. The United States is a land of great culture and great art, a land of great music and great literature. The United States is a land of great people, people who are brave and bold, people who are determined to make their mark on the world. The story of the United States is a story of greatness, a story that shows the power of the human spirit to create a better world.

in any part of America where agues are prevalent - It grows in the woods, in the fields, in lerts, gardens, roads, and so forth, & about Old barns in places richly manured where it is generally of the most luxuriant growth and best quality. - The blue kind grows nearly in the same places but much of it on sandy roadsides near the sea shore;

They differ thus. The white No. 1 has a Square Stem. Its leaf between the appearance of Balm and the American Nettle alternately two and two at right angles. The Root much resembling Snake Root, with small fibres in abundance has a very bitter taste and of an astringent quality. It generally grows with one or two or more stems projecting from the same Root from which it always rises perpendicular without branching until it comes to the Top all which consists of an uncertain number of green slender stems from one to perhaps twenty with a small white blossom upon each from the lower part to the extremity, its leaf somewhat thin and downy like the Nettle; the Stem is of a reddish Cast particularly near the Roots.

The Blue Blossomed kind No. 2 is very irregular in its vegetation throughout, except in its quadrangular stem, and its taste which are nearly the same of the other kind, but the stem branches often and puts forth fascials in various places; the root is also stubbed and hard, more like Wood, or the roots of Marecole; Its leaf is thicker, of a deeper Green inclining to Blue and the Veins thereof sometimes tinged with red or purple. It spreads amongst the grass and is generally of a bushy growth seldom exceeding two feet in height: It is however, sometimes, much like the white and its taste might deceive, but the stem and leaves will always discover it. Both are among the earliest vegetations and have young reddish buds all the winter ready to shoot.-----W.T.



Errors discovered on "Experiments on Vervain",
VERVAIN by William Tatham (1782-3-4)



No 3
 A full sized leaf of No 1
 moderate Growth

on the back of illustration is:

Verbena. Linn. Gen. Plant 30.
 Verbena cindra species Longia, caluibanaria folius ovatis serratis.
 Syst; Nat:
 Vervain. Simple Joy.
 Columbian Magazine; May 1787

Experiment in Watering Plants

by William Tatham

Some Years ago I was led from observations on the common methods of watering, on a hot season, by overflowing or the use of a watering pot, to consider the principles of operation upon plants in a Vegetated State.

I observed that when this method was used about Sundown it had generally a good effect, but not always; but if used in the midday heat or morning, it generally caused the Earth to parch; or perhaps in some instances in standing water, scalded the Juices and checked the progress of vegetation until annihilation of the Vital Substance was affected.

I believe from my remarks on the cultivation of Maize or Indian Corn (Zea mays) that in all seasons a continual working of the ground is a more certain mode of luxuriating the crop than any ill-timed mode of watering.

40 However, I was satisfied there might be some mode of watering better than any which I had yet seen to supply the place of rain thro a dry season. I viewed the plants in vegetation with an anatomical eye, and supposed that the perfect state of those next to that which held a due proportion of solid and fluid substances; hence to surcharge or diminish either of the components requisites, must tend to injure that original parity in which the subject was first created.

41 Now the Author of Universal existence had limited immovable Laws or rules of Action to vegetative progression as certainly as to human conduct, and made the system in this case dependent upon the earth for its immediate nutriment through its various stages. The difficulty was when the Earth itself was deprived of its nutritious humidity by an extraordinary drought in hot weather, how the soil was so to be remedied as to have the fluid supply graduated to the successive demands of vegetation, without subjecting the Earth to be parched or the plant to be scalded with standing Water.

To effect this I have recourse to an experiment as in the unsexed sketch Page 38. - I twisted a conductor or Siphon (really) (of Cotton Candlewick) proportioned to the size of the plant and having singled out two Mellon Vines, the one considerably more flourishing than the other in nearly the same soil and convenient to each other, I made my experiment on the one which was in a declining state, thus - I elevated a pot of water above the plant so as to command the fountain principle, covering it to prevent exhalation through the vehemence of the Sun; Having first dipped by Cotton Siphon in the water until it was sufficiently wet, I tied a small stone to one end of it, which I dropped into

ORIGINAL ARTICLES

THE EFFECT OF VITAMIN DEFICIENCY ON THE
GROWTH OF THE RAT
BY DR. J. H. HOLLAND, JR., AND DR. J. H. HOLLAND, JR.
Department of Physiology, University of Illinois, Urbana, Ill.

ABSTRACT: The effect of a diet deficient in vitamins on the growth of the rat was studied. The results show that the growth of the rat is retarded when the diet is deficient in vitamins. The effect is more pronounced when the diet is deficient in both vitamins A and B than when it is deficient in only one of them.

INTRODUCTION: The purpose of this study was to determine the effect of a diet deficient in vitamins on the growth of the rat. The results show that the growth of the rat is retarded when the diet is deficient in vitamins.

METHODS: The rats were divided into two groups. One group was fed a diet deficient in vitamins, and the other group was fed a diet containing all the necessary vitamins. The growth of the rats was measured by weighing them at regular intervals.

RESULTS: The rats fed the diet deficient in vitamins grew much more slowly than the rats fed the diet containing all the necessary vitamins. The effect was more pronounced when the diet was deficient in both vitamins A and B than when it was deficient in only one of them.

CONCLUSIONS: The results of this study show that a diet deficient in vitamins retards the growth of the rat. This is especially true when the diet is deficient in both vitamins A and B. The results also show that the effect is more pronounced when the diet is deficient in both vitamins A and B than when it is deficient in only one of them.

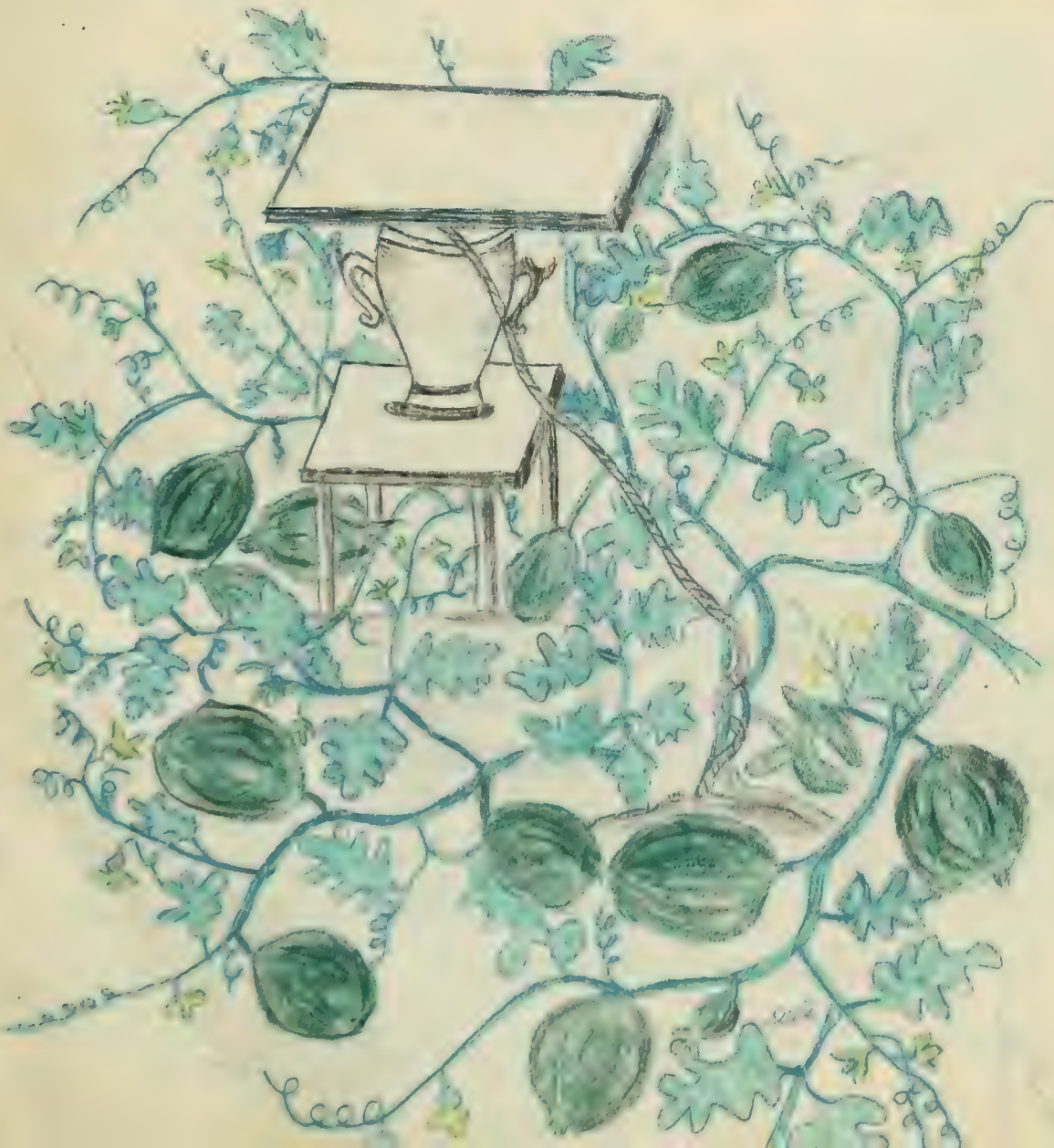
the jet of water passing the cipher and gently round the rest of the vine into the earth by not taking the mold lightly and covering it up again as before.

42.

In a short time the earth became moist a few inches round the spot in which state it continued through the heat of the day without parching; The delphion supplies what the plant demands (it is so rare) being proportioned to that end; a cool succession takes place, and in a few days the declining vine becomes flourishing and outgrows its neighbor. I have repeatedly tried this experiment with success and think the plan capable of extension by having troughs to contain water the length of a bed in a garden.

J. F.

Experiments on Vegetation
by the help of a Cotten or Totten Syphon
made in Virginia and North Carolina.





NEW AMERICAN.

In all the Western Countries of the United States this Tree, the Sugar Ash or Sugar Tree as it is usually called abundantly grows; and the Country people with the common Kitchen Stewards use the Kettles of the Family generally, some enough to answer their domestic purposes.

I believe the greatest abundance that has been manufactured into Sugar has been collected from the soil borders of the States of Canada, and the New Northern and Eastern Countries; and I have seen in the House of Jonathan Williams Esq. (a new Jew of the late Mr. Benjamin Franklin) of Philadelphia refined Sugar in Leaf from the American Sugar Maple equal to that of any English Sugar Refinery; and which Mr. Williams who is well versed in that profession assures me could be afforded for one penny per pound more (in its present state) than what English Sugar could be bought for.

In the territory south of this which borders upon his West (Catholic) Catholic Colonies, the Indians made more Sugar (in this way) in the year 1792 than the whole population consumed; and as I was in that country the following Spring, I collected this information from a captain who is to Dr. Alexander Wilson, a friend of that Country and I have known 20 years or more to be depended on.

I made further inquiries of a Farmer in that country whose daughters were usually more than his family has occasion for; and as this may throw some light on the subject which may not only be useful to the Botanic Science, but lead to actual production from the immense property of this kind which is N. C. Majesty's Colonies of Louisiana must contain, I will recite the result of my question to Mr. Dwyers, by way of questions and answers as they happened 206 April 1793

Q. -----What is the greatest quantity of Sugar made in your Family in any one Year?

AN. -----My Children make in the Year one thousand Pounds of Sugar.

Q. -----What Kettles were used by then?

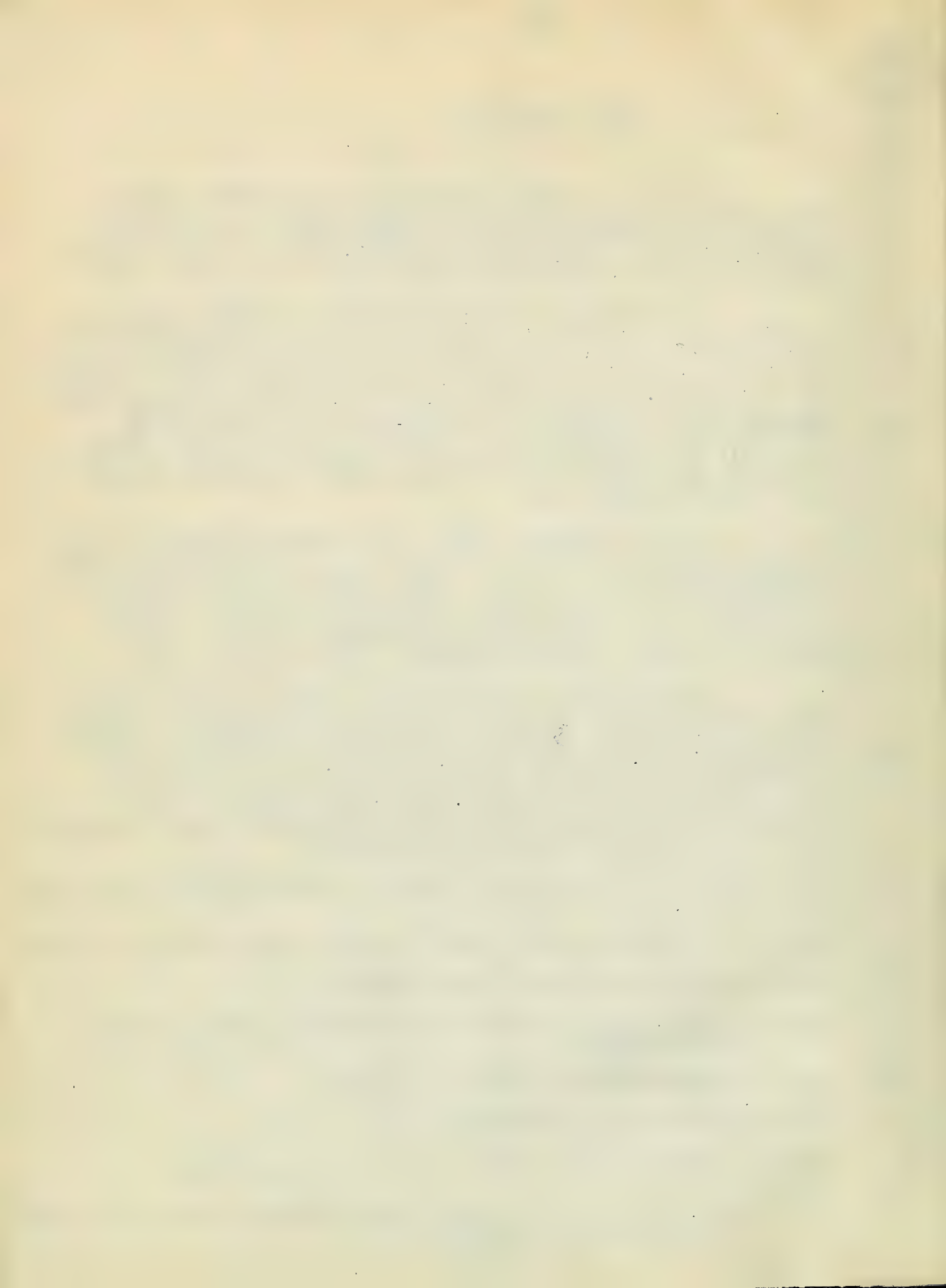
AN. -----2 of 16 Gallons each. 1 of 30 Gallons, and 1 Iron Pot of 10 Gallons.

Q. -----What Number of Trees were tapped?

AN. -----Between 80 and 90 Trees.

Q. -----What quantity will a Tree yield in a good day?

AN. -----It will run off as much Sugar Water as a small still could run in distilling Liquors.



Q. -- What Months are best for making Sugar? --

A. -- February; Sometimes the Seasons will vary from the Time Frost begins in the commencement of Winter, until the following Spring, and the longer a Tree is Tapped, the later will be the Water.

Q. ---Upon your six hundred and forty Acres of Land (being one Mile square) what Quantity of Trees do you think there are?

47 A. ---The greatest part of the Whole growth are Sugar Trees; One hundred hands might be fully employed, but this exertion would destroy the Trees.

Q. ---What method of tapping do You prefer?

A. ---With an Axe, in the same way Perpetine Trees are tapped.

Q. ---Would not it do better to bore an Auger hole in the Tree, which I perceive some People do?

A. ---No, - because the Tree will become watery, rotted and soured round the Hole, and it is always necessary when this happens to cut and pare the Tree until You come at Fresh Wood.

Q. -- Have you tried the Common Maple?

A. -- Yes; - It will make a Sugar but this is faint tasted and indifferent. The White Walnut Tree has a similar property; my childrens (for experiment sake) have made Sugar from this Tree, but it always retains a bitter taste.

Q. -- Have you observed the leading distinctions between the S. Tree and the Common Maple?

A. -- Only that the Sugar Tree has a rough Bark, and the Maple a smooth one with some little difference in the Leaf.

Q. -- What Quantity of Water will make a pound of Sugar?

A. -- I never exactly noticed; - A Bushel will make a pound at any time. I have made 30 lbs. in one day.

48 Q. -- At what time does the Tree loose its Saccharine Properties?

A. -- As soon in the Spring as the Sap* rises in the tree.

*Note. This circumstance shows clearly that the Acer Saccharinum possesses two distinct liquors which succeed each other alternately with the respective seasons. Quere; if other Trees possess this quality or whether it is peculiarly confined to the Saccharine distinction?

Q. -- Is this effect sudden?

A. -- No. -- gradually until the Juice will only make a kind of Wax which cannot be granulated into Sugar but can be

Fluid is in this state, if Frost returns, it will regain its
Sacharine Property.

50

Q. -- Does the fluid degenerate progressively from this property
until a total evaporation takes place through the action of
boiling.

A. -- Not while it runs at all; It will in the worst stages of
the process make Melasses fit for immediate use, and Sax:
but this Melasses has the defect of turning sour in a short
time, which is not the case with the Melasses that is
drained from the sugar.

Q. -- What effect has clarifying or settling the Water after it is
boiled the first time?

A. -- When the water is boiled until its sweetness is perceptible
to the taste, Clarifying leaves a sediment of Black Mud as
fine as flour.

Q. -- Is the Sugar free of quick growth?

A. -- The tree grows fast but I cannot ascertain their age of Satur-
ity.

P.S. I have remarked that this Sugar is more harmless than that of
the cane; for any quantity may be eaten by a Child or other person
without producing sickness, which the other kind does in a violent
degree.

W. T.

51

MYRANOMA QUERCIFOLIA.

Bartram Travels - Page 380

52

This Shrub is to be found in the Country of the Ocmulgee
river in Georgia. It grows in Coppices or Clumps near or on the
banks of the river and creeks. Many stems usually arise from a root
spreading itself greatly on all sides by suckers or offsets. The
stems grow five or six feet high declining or diverging from each
other and are covered with several barks or kinds, the last of which
being of a cineraceous light colour and very thin, at a certain age of
the stems or shoots, cracks through to the next bark and is peeled
off by the wind, discovering the under smooth dark reddish brown
bark, which also cracks and peels off the next year in like manner
as the former; thus every year forming a New Bark. The stems divide
regularly or by joints, though the branches are crooked or wreathed
about horizontally, and these again divide, forming others which
terminate with large heavy panicles of Thyrsi of flowers; but these
flowers are of two kinds: The numerous partial spikes which compose
the panicles and consist of a multitude of very fruitful flowers
terminated with one or more very large expansive Neutral, or Hook
flowers, standing on long slender stiff peduncle; these flowers are
composed of four broad oval petals or segments, of a dark rose crimson

colour at first, but as they become older, acquire a deeper red or purplish hue, and lastly are of a brown or ferruginous color; these have no perfect parts of generation of either sex, but discover in their center two, three or four papilla or rudiments; these neutral flowers with the whole panicle are truly permanent, remaining on the plant for years until they dry and decay.

53

The leaves which clothe the plants are very large pinnatifid or palmated and serrated or toothed, very much resembling the leaves of some of our Oaks. They sit opposite, supported by slender petioles and are of a fine full green colour.

From Bartram.

(An illustration of *laevifolia* showing leaf and flower from Bartram is pasted in).

54

ANDREA FRAX

Bartram's Travels Page 18.

(The illustration from this page of Bartram's Travels is pasted in.)

This plant is found in a country between the rivers Alabama and M. M. in the state of Georgia; it is very dwarf, the stems seldom extending from the earth more than one foot or eighteen inches (English measure) and are weak and almost decumbent. The leaves are long extremely narrow, almost linear. However, none as they are only retain the figure common to the species, that is lanceolate, broadest at the upper end, and attenuating down to the petiole which is very short; their leaves stand alternately, nearly erect, forming two series or wings on the arcuated stems. The flowers both in size and color resemble those of the *Antirrhoe* and are single from the axils of the leaves and incurved pedunculi bending downwards. I never saw the fruit.

Bartram.

55.

ANDREA GLOBIFLORA

Bartram Page 19 & 169 Travels thro Georgia, Florida, etc. (The engraving showing foliage, flower, fruit, and seed is pasted in.

Andrena incarnata, floribus grandioribus, paniculatis; this grows three, four, or five feet high, the leaves somewhat cuneiform or broad lanceolate, attenuating down to the petiole, of a pale or light green color, covered with a pubescence or short fine down; The flowers very large, perfectly white and sweet scented, many collected together, on large loose pedicels or spikes; the fruit of the size and form of a small cucumber,

the skin or exterior surface somewhat rimose or scabrose, containing a yellow pulp of the consistence of a hard custard and very delicious wholesome food.

- 56 On page 56 is an illustration of *Androsida pulverulenta* pasted in with the following note:
Bartram's Travels Page 474. This plant is also called *Androsida laevis*; but hath no farther description annexed to it.
- 57 On page 57 is an illustration of *Ixia Coccinea* pasted in with the following note:
Bartram's Travels Page 163, called also Cereulean Ixia of an acule cast; but no farther description.



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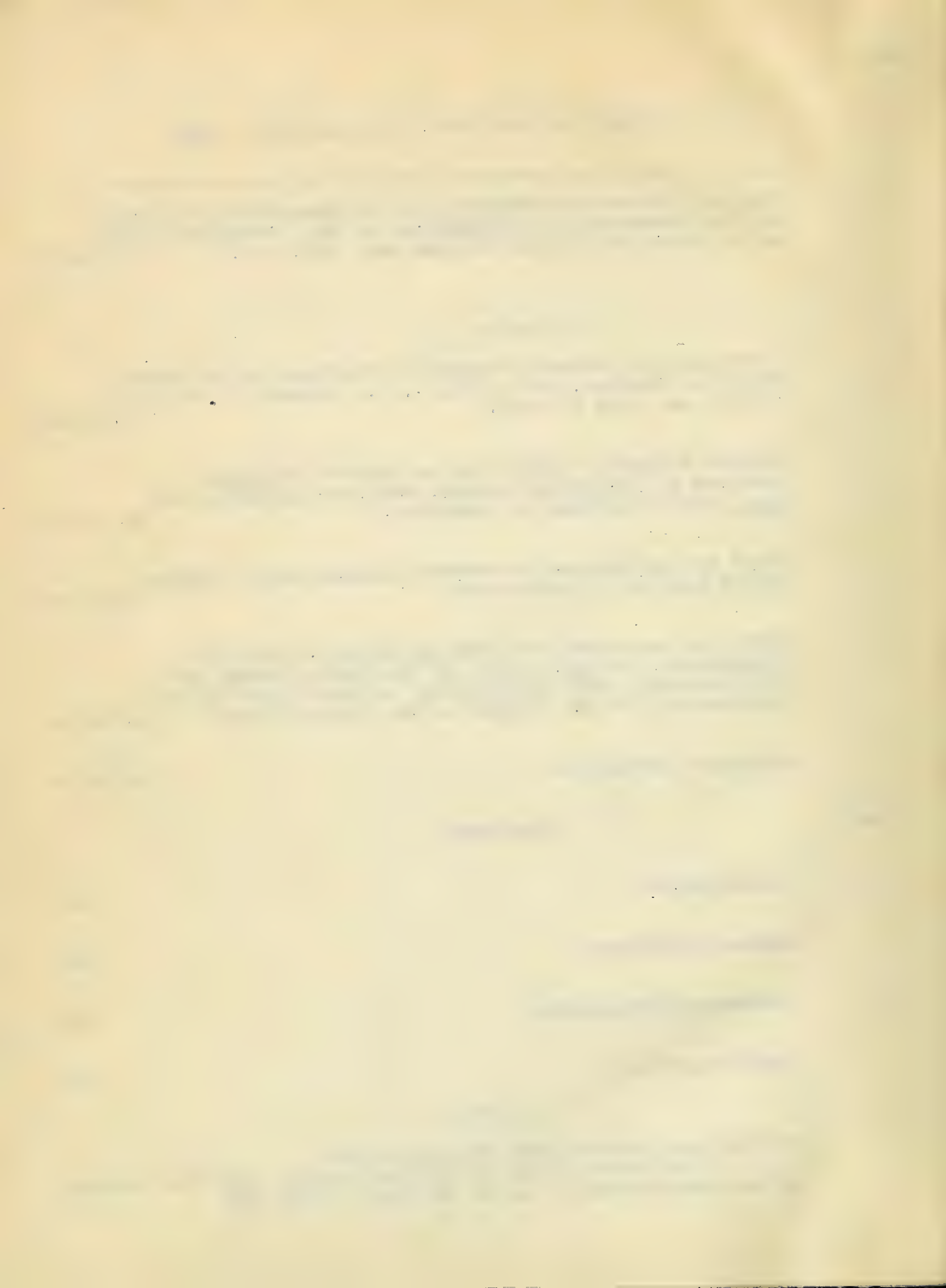
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FINIS

On the Cover page is the following note:

For some account of William Latham, see "The Journal
of American History" Vol. 4. #4 (1910), Page 371




This typewritten copy prepared in the office of

Warren H. Manning, North Billerica, Mass..

has not been very carefully compared with the original handwritten manuscript for correction.

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